Technical Notes - 5
Management

September 12, 1934

APPALACHIAN FOREST EXPERIMENT STATION

The Station has received recent inquiries regarding site index curves for species other than the mixed hardwood stands for which such data are already available. The attached curves for second growth yellow poplar and white pine will be found suitable for approximate site determinations in the Southern Appalachians.

The white pine curves are based upon measurements of 376 dominant and codominant trees growing in mixture with hardwoods, the common form of occurrence in the Southern Appalachians. The poplar curves were based on the height-age relationship of the average tree in the dominant canopy as measured on 89 well stocked sample plots. The poplar curves are particularly applicable to pure, well stocked, even aged stands, but can be used for approximate site determinations in stands of poplar mixed with other species.

The following method is suggested for site determinations of both species when only 3 classes of site are recognized.

1. Determine the total age and height for 10-20 trees in a given locality measuring only dominant and codominant trees that are growing under fairly closed conditions of crown canopy, Avoid isolated or open grown trees.

2. If the trees measured are of approximately the same age (within 10 years) compute an average age and height for the group and determine the site by reference to the curve.

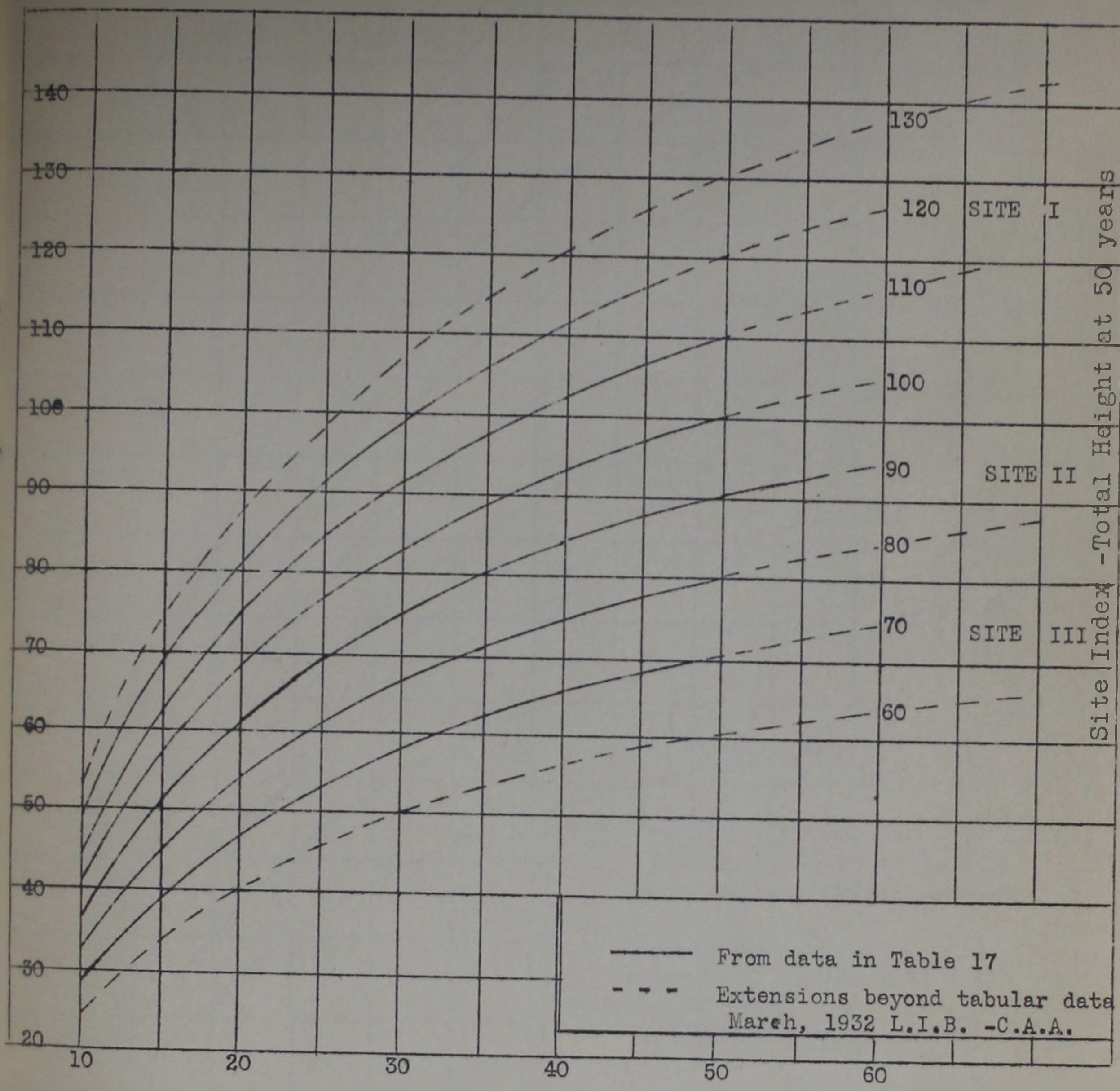
3. If the sample trees measured are of widely different ages determine a site index for each tree and compute an average site for the group.

A limited number of copies of the site curves are available and can be obtained by writing the Appalachian Forest Experiment Station, 223 Federal Building, Asheville, N. C.

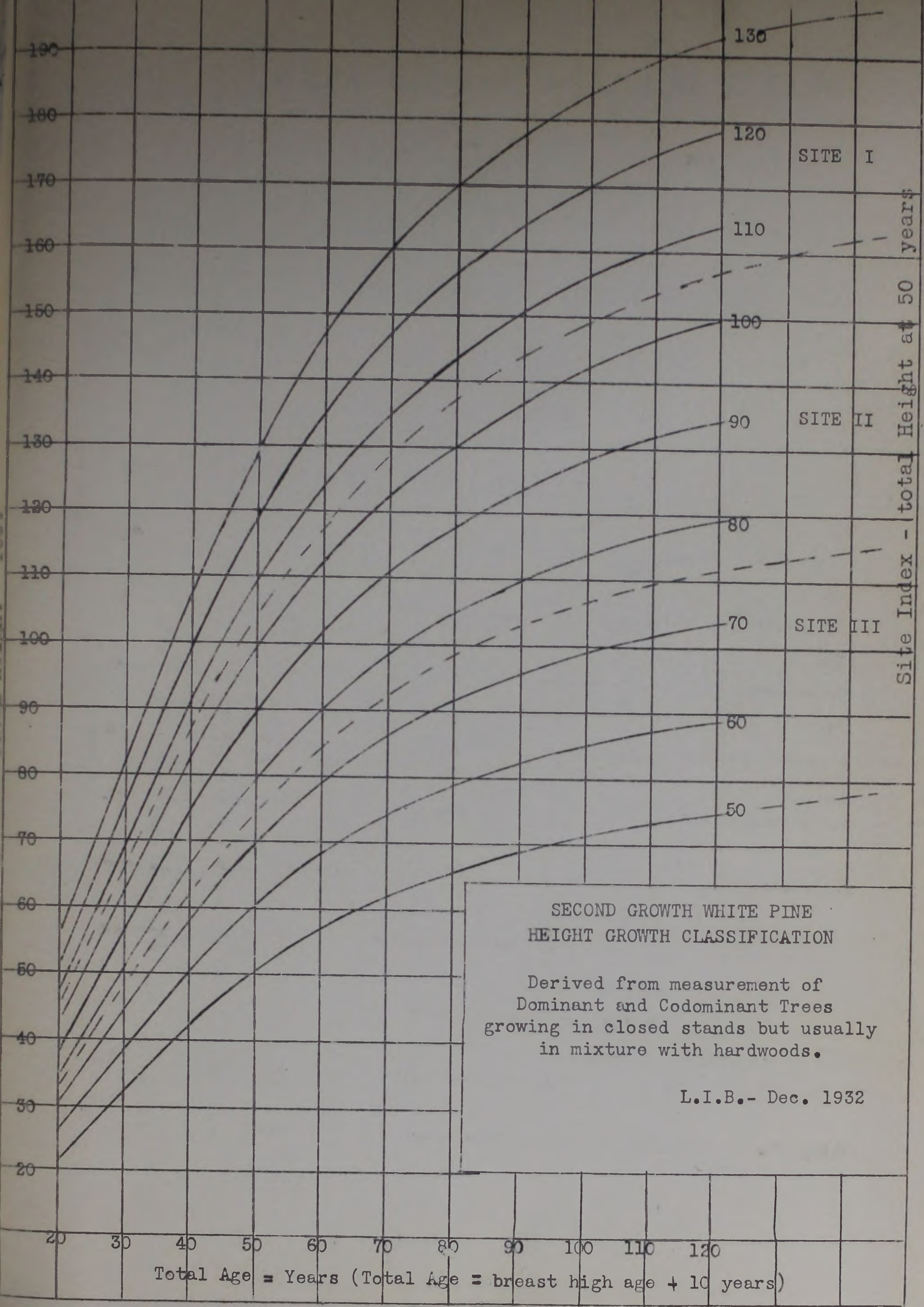
SECOND GROWTH YELLOW POPLAR

HEIGHT GROWTH CLASSIFICATION

Derived from Table 17, U.S.D.A. Technical Bulletin No.356, "Yellow Poplar Characteristics Growth and Management by E.F. McCarthy



Total Age - Years (Total Age = breast high age + 3 yrs.


130
120
110
100
90
80
70
60
50
SITE I
SITE II
SITE III
Site Index - total Height at 50 years
SECOND GROWTH WHITE PINE
HEIGHT GROWTH CLASSIFICATION
Derived from measurement of
Dominant and Codominant Trees
growing in closed stands but usually
in mixture with hardwoods.
L.I.B.- Dec. 1932
20 30 40 50 60 70 80 90 100 110 120
Total Age = Years (Total Age = breast high age + 10 years)